

PROJECT OVERVIEW

ARI completed advanced phased array ultrasonic inspections on critical bearings at a ship loading facility.

The inspection program focused on detecting internal cracking on bearing surfaces that were not visible externally. These bearings are directly connected to the wharf structure and play a critical role in maintaining structural integrity.

INDUSTRY: Mining / Port

METHOD: Phased Array Ultrasonics



Wharf bearing assembly

THE CHALLENGE

INTERNAL CRACK DETECTION

The client required a reliable inspection method capable of detecting hidden cracking without removing the bearings from the wharf structure.

LARGE BEARING ASSEMBLIES

Each bearing weighs between 500kg and 1000kg, meaning conventional inspection methods would require significant lifting equipment, additional manpower, and extended operational downtime.

KEY OUTCOMES

IN SITU INSPECTION COMPLETED

Critical bearings inspected without removal from the wharf structure.

INTERNAL CRACKING ASSESSED

Advanced phased array ultrasonics used to assess hidden internal cracking.

APPROXIMATELY 30 MINUTES PER BEARING

Efficient inspections completed with minimal operational disruption.

REDUCED LIFTING & MANPOWER REQUIREMENTS

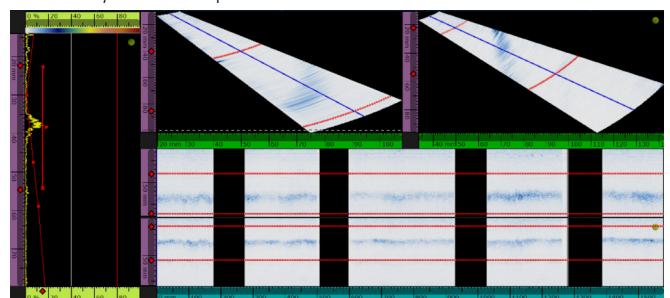
Reduced reliance on significant lifting equipment and additional manpower.

DIGITAL INSPECTION RECORDS

Inspection data retained for ongoing monitoring and comparison between inspection windows.



Phased array ultrasonic inspection



PAUT scan data example